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ABSTRACT OF THE DISCLOSURE

There is provided an encoding apparatus and method in a CDMA communication system. To encode input information of a k -bit sequence and generate a codeword with length $N > (2^k - 1)$, an encoder encodes the input information using an (r, k) simplex code and generates a sequence of code symbols of length r ($r=2^k - 1$), a repeater repeats the sequence of code symbols t times ($t = \left\lfloor \frac{N}{r} \right\rfloor + 1$), and a puncturer performs puncturing A times ($A=rt-N$) on the t repeated code symbol sequences so that the resulting codes have length N . The punctured symbols are distributed uniformly across the repeated code symbol sequences or confined to the t^{th} repeated code symbol sequence.

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